

The estimated conversion costs should be considered a minimum or a starting point, as they do not include other costs that are not quantified in this report but nevertheless would exist. In addition, there are higher costs to operate and maintain an underground system, which ultimately would be borne by the customer. While the O&M costs on a per mile basis for overhead systems and direct-buried underground systems are comparable, the O&M costs of underground systems with duct banks are almost four times more than that of overhead systems. Duct bank construction is needed in large cities to handle commercial loads where conductors are placed in concrete duct banks and transformers are located in underground vaults.

The reliability of underground systems during normal weather conditions is better than overhead systems. Underground systems experience about half as many system interruptions and tap line interruptions as overhead systems. This gain in reliability, however, is offset by a 58% increase in repair time, as underground faults require specialized repair crews to locate the faults, dig up the area around the fault, and repair the cable. In most cases, such an effort requires different crews and scheduling. During severe weather events, customers with underground facilities are less likely to be interrupted but will be among the last to have power restored when there is an underground fault.

The Public Staff believes the wisest course of action in view of these results is for the Utilities to continue their current practices of (1) adding new facilities underground when it is economical to do so or when the cost difference is paid by the customer or developer requesting the new underground service, (2) replacing existing overhead facilities with underground on a case-by-case basis upon request when the requesting